

Your toothbrush may be a biohazard

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It may come as a shock, but if you're like most people, every time you put your trusty toothbrush in your mouth, chances are you're giving a gang of nasty germs a free ride straight into your system.

"Let me make it perfectly clear that in no way should this be construed to mean you shouldn't brush your teeth. You absolutely should," advises Dr. R. Tom Glass, a leading research authority on toothbrush hygiene and professor

emeritus of oral pathology at the University of Oklahoma Health Sciences Center. "But if it's not cared for properly, your toothbrush is a substantial health risk, with the razor blade being a close second."

A substantial amount of research confirms that a variety of bacteria and viral agents can survive for substantial periods of time on your toothbrush. Among these microbes are influenza viruses, herpes simplex I, streptococcus, staphylococcus, candida, gingivitis and bacteroides that causes gum disease.

"Your toothbrush is the perfect

breeding ground for these bugs," says Glass. "There's food and water, and the brush itself provides the portal of entry into your body." In effect, "Your toothbrush is an enriched petri dish on a stick."

► Toilet brush?

"To make matters worse, we keep our toothbrush in the out house," reveals Glass, who is also professor of pathology at Oklahoma State University, College of Osteopathic Medicine. "The bathroom may be inside now, but it is clearly the most unsanitary room of the house. Every time you flush, you propel the germs in

your toilet into the air where they can land on your nice, wet toothbrush."

And if you think hanging your toothbrush in the medicine cabinet is a solution, think again. Germs like dark, wet, warm environments even more than the open air.

Studies have demonstrated that toothbrushes become infected sometime after one week of use, but before one month. As a result of his research, Glass advises that you replace your toothbrush with a new one every two weeks.

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This recommendation is at odds with the American Dental Association's counsel that toothbrushes should be changed "every 3-4 months or sooner if the bristles become frayed." Most Americans don't even do that, replacing their brushes on average only twice a year.

But Glass's research reveals that 66% of the initially rounded bristles of your toothbrush become pointed, "tiny little needles" in as little as two weeks of use. The sharp tips can cause tiny lacerations in the gums that allow infections to enter the body. Electric-powered brushes with old bristles can make matters even worse because they're harder on gums.

"It's almost impossible to determine how many people are getting sick from their toothbrushes, but in my practice I've found that just changing the toothbrush alone can reduce the disease process in 25% of my patients," says Glass. "I take all my patients suffering from chronic infectious diseases off their electric toothbrushes to prevent them from re-infecting themselves,"

And because family members sometimes forget to change heads on their power brushes, cross contamination can occur, especially when someone in the household is sick.

Even worse, whether ill or not, the family may not be the only ones using your brush. According to Glass, pets - particularly cats - as well as cockroaches and even rats can be attracted to the food and water trapped on the brush.

Existing scientific research clearly shows that infectious agents like the influenza and herpes viruses can thrive for significant periods on a toothbrush. In one study, herpes had only decreased by 50% after one week of being introduced to the brush.

But strangely, the ADA "does not think it necessary for consumers to change their toothbrushes after recovering from a cold or other infectious disease." According to their official Web site, detergents in toothpaste kill microorganisms that may linger on the bristles between brushings.

But Glass's findings don't support that contention. "No

one has ever refuted any of my science, and I stand by it," he counters. "I'd like to review their research."

► Put your money where your mouth is

While changing your brush every two weeks may seem like an unnecessary expense to some, Glass points out that antibiotics to treat periodontal infections cost easily as much or more. The cost of buying a couple dozen new toothbrushes each year also pales in comparison to the money you can spend treating more serious illnesses such as heart disease, stroke, diabetes, ulcers, and pneumonia - all of which have significant correlations to gum disease.

And if you think you're safe just using a new toothbrush, you may be dismayed to learn that in one study four out of five brand new brushes straight out of the package were already contaminated with staphylococcus epidermidis.

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